

**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue
Implementation and Administration of
California Renewables Portfolio Standard
Program.

Rulemaking 11-05-005
(Filed May 5, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) RESPONSE TO ENERGY
DIVISION REQUEST FOR PRE-WORKSHOP COMMENTS ON A RENEWABLE NET
SHORT POSITION CALCULATION**

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I. INTRODUCTION

Pacific Gas and Electric Company (“PG&E”) appreciates that opportunity to offer the following comments in response to the “Request for Pre-Workshop Comments on a Renewable Net Short Position Calculation” issued on May 24, 2012 (the “Request for Comments”). PG&E looks forward to participating in the workshop on June 12, 2012.

PG&E understands the California Public Utilities Commission’s (“Commission”) desire to create a standardized RPS net short calculation methodology that can be applied not only across retail sellers, but that can also be used as an input into broader planning processes like the CAISO Transmission Planning Process (“TPP”) and the Commission’s Long-Term Procurement Plan (“LTPP”) process. PG&E supports efforts to reduce redundancy and potential inconsistencies in the public record regarding the statewide and load-serving entity (“LSE”)-specific RPS compliance needs.^{1/} Nonetheless, a natural tension exists between the desire for

^{1/} In this regard, PG&E submits that the RPS Plans should be the primary source of RPS net short calculations for compliance-related purposes going forward. IOUs should be able to update these calculations in advice letters seeking approval of specific RPS transactions to the extent the data in the RPS

inputs that are “completely transparent” and “largely accepted by the stakeholder community” and a retail seller’s need to conduct a necessarily subjective and proprietary evaluation of the viability of the projects in its portfolio for purposes of procurement and compliance planning.^{2/}

With its draft 2012 RPS Plan, PG&E has publicly provided the aggregate outputs of PG&E’s internal forecast of its RPS compliance position beyond 2015.^{3/} Its modeling employs the best information available to PG&E, including information provided confidentially by its counterparties. In providing these aggregate forecasts, PG&E sought to provide greater transparency into its procurement planning process and to align public information regarding its net short position with PG&E’s own internal assessments. However, the necessary trade-off for providing this more accurate aggregate information is the need to keep the project-specific assessments confidential. As discussed more fully below, to the extent the Commission and CAISO require project-level risk-adjusted delivery forecasts that can be vetted publicly, PG&E recommends that they make simplifying assumptions or rely on external, independent evaluations.

Regardless of what specific forecasts are used in the LTPP or TPP, PG&E’s internal net short calculation, as initially presented in its 2012 RPS Plan, should remain the sole benchmark against which PG&E’s future procurement decisions are evaluated. PG&E must be able to rely on its own best estimate of its RPS procurement need if it is to be held accountable for achieving RPS compliance.

Plan becomes stale. Specifically, PG&E recommends that future RPS Compliance Reports should be only historical in nature and should not include forward-looking forecasts. Under the current RPS Compliance Report template, the compliance forecasts are inconsistent with the RPS Plan because they do not include adjustments for risks of project failure or other operational variability.

^{2/} Request for Comments at 2.

^{3/} Because under D.06-06-066 the front three years of PG&E’s internal retail sales forecast are confidential, PG&E has provided the 2012-2015 RPS aggregate net short position data only in its confidential filing under seal.

II. RESPONSES TO SPECIFIC QUESTIONS

A. **Q1: For equations (a) and (b), are all components of the net short calculation accounted for? What other components need to be considered in calculating the net short position?**

1. Equation (a)

As proposed, equation (a) is only suitable for quantifying an LSE's net short position in the post-2020 period, when compliance with the 33% RPS Program will be measured annually. Delivery shortfalls calculated for individual years in the 2011-2020 period cannot be said to represent the LSE's "compliance net short," since compliance is measured on a multi-year rather than annual basis in that period. Accordingly, PG&E proposes that equation (a) be modified to account for discrete periods over which compliance is measured (multi-year periods prior to 2020, and annual periods post 2020).

Additionally, it is overly complex and unnecessary to subtract the *Online But Expiring Generation* volumes from online and risk-adjusted forecasted generation. As noted in PG&E's 2012 RPS Plan, PG&E does not assume any re-contracting in its RPS net short projection. Thus, when the contracts associated with online generation in PG&E's portfolio expire, the loss of these volumes is already accounted for in the *Risk-adjusted Forecast Generation* component of the equation.

Even if only applied to the post-2020 period, equation (a) also does not account for the potential excess deliveries of buckets 2 or 3 products (i.e. volumes that exceed the product content category amount for a given year, and as such cannot be counted towards compliance in that given year). While some of excess buckets 2 or 3 volumes may be banked to another year, their exclusion from equation (a) could affect an LSE's net short calculation (e.g. result in a larger compliance shortfall), and as such should be incorporated in the formula.

Finally, to the extent that a retail seller's *voluntary* margin of over-procurement (as described on pages 52-53 of PG&E's 2012 RPS Plan) is approved by the Commission, this amount should be incorporated into the net short calculation. A voluntary margin of over-procurement is a margin in excess of the statutory minimum margin of procurement and is designed to address external factors that present forecast risk other than project delay or failure.

2. Equation (b)

The simple 10-year view proposed in equation (b) may not sufficiently capture an LSE's total 10-year net short position, particularly if the initial year of the 10-year time horizon occurs in the middle of a compliance period. For instance, if equation (b) were used today to calculate an LSE's 10-year aggregate net short position, any 2011 delivery shortfalls would be omitted from the total calculation. Because any such deficit would affect an LSE's compliance position over the 2011-2013 compliance period, the resulting aggregate net short position would understate an LSE's true need. This formula should be adjusted to aggregate the net short calculations from equation (a) for the *2011-2020 + additional years up to 10 years from current year* period.

Equation (b) proposes to subtract an LSE's bank of excess deliveries from its total net short calculation. This approach seems counterintuitive, as it would increase, rather than decrease, an LSE's projected need by the very volumes which could help it smooth out compliance shortfalls.^{4/}

^{4/} PG&E did not include its projected bank of excess deliveries when calculating its net short position (see Section 6.5 of its draft 2012 RPS Plan). Instead, PG&E holds its bank in reserve to help address variability in supply or demand for RPS-eligible products other than the project delay or failure risk addressed by the statutory minimum margin of procurement. Thus, to the extent the Commission ultimately decides to require LSEs to include banked surplus volumes in their compliance net short calculations, LSEs must also be able to include voluntary procurement margins to account for the operational variability and other factors that the bank would otherwise be meant to smooth.

Finally, equation (b) does not allow retail sellers with net deficits from the 20% RPS Program (pre-2011) to account for those deficits when calculating their current 10-year and first compliance period net short position.

B. Q2: Is there any reason why the minimum margin of procurement should not be used to calculate a utility's RPS net short position? Why?

PG&E does not object to including a minimum margin of procurement in the RPS net short calculation. As described in more detail in its draft 2012 RPS Plan, PG&E believes an appropriate minimum margin of procurement includes the volumetric margin of over-procurement upon which PG&E currently relies to meet its RPS compliance requirements taking into account expected project delays and failures in its existing portfolio of renewable resources. However, the need for over-procurement to account for any project failure or delay in incremental RPS contracts (those added to PG&E's portfolio in the future, including through the 2012 RPS Solicitation) will necessarily vary over time, and will depend on factors that are LSE-specific, including the amount of lead time an LSE has to fill its identified need, the actual success/failure rates of its existing portfolio, changes or expected changes in its load forecast, and actual retention of expiring volumes from existing facilities, among other factors. For this reason LSEs should not be required to incorporate a margin of over-procurement for incremental volumes when calculating their net short position.^{5/}

^{5/} Given the long lead time PG&E has to fill the need identified in its 2012 RPS Plan and the still-to-be-determined availability of competitive volumes from existing resources with expiring contracts, PG&E currently believes that procuring steady and moderate volumes in each annual solicitation over the coming years should be sufficient to meet its RPS targets. As a result, PG&E does not propose to incorporate an explicit margin of over-procurement for its incremental contracting in the volumes it seeks in its 2012 RPS Solicitation, although PG&E's overall RPS portfolio clearly accounts for significant future project failure.

C. Q3: Does enough industry knowledge and project history exist today which would allow the Commission to develop a probabilistic methodology that ranks projects based on achieving critical milestones as discussed above?

There does not yet exist sufficient project history data, or renewable industry knowledge, to support the development of a universally-applicable and sufficiently accurate methodology for assigning success probabilities to projects based on objective criteria. While forecasts based on objectively-determinable milestones may be useful for high-level or statewide planning purposes, PG&E opposes any requirement that its procurement decisions be evaluated based upon consistency with such a forecast, given that PG&E believes its internal, proprietary assessments are more accurate.

While various efforts have been undertaken to quantify the time-variant risks of developing new renewable projects to date, none have provided a conclusive, objective data-driven methodology that provides sufficient indicia of reliability and accuracy. For instance, a recent report by IHS Emerging Energy Research (“IHS ERR”)^{6/} employed a deterministic methodology for calculating success probabilities and estimated that over the course of 2002-2011 new renewable projects have had a 36% failure rate in California. However, when questioned about the rigor of their methodologies, IHS ERR analysts readily agree with PG&E that, due to the lack of sufficient data, any success ranking assessments will necessarily have to rely on anecdotal evidence and qualitative appraisals.

In addition, through its Loan Guarantee programs, the Department of Energy has determined that projects must start construction in order to be eligible for the loan. This implies that U.S. government experts believe that start of construction is an important development milestone that increases a project's viability and curbs the risk of failure. However, PG&E is

^{6/} Saeger, James, and Klein, Alex. "Taking Stock of California's Renewable Portfolio Standard." IHS EER. January 31st, 2012. Pg. 12. Report is available through subscription.

unaware of any federal government study that specifically quantifies how much risk is mitigated upon reaching the start of construction.

D. Q4: If the answer to Q3 is yes, what milestones are important in achieving projects success and what weighting would you assign to each of the milestones?

Not applicable (see response to Q3).

E. Q5: One investor-owned utility expressed concern that ordering a utility to make a projection on whether a project succeeds or fails based on the utility's own internal analysis puts the utility at risk of litigation because of the perception that the IOU is not supporting the PPA as it is contractually mandated, particularly if the project portfolio is used in a public forum. Is this a concern that the Commission should take into consideration? If so, present an alternative solution that would be adequate for both RPS and LTPP purposes.

A retail seller's subjective assessment of the viability of a specific project in its portfolio should remain internal and confidential for a number of reasons. First, these project-specific assessments rely heavily on information provided to an LSE by its counterparties through its contract management process. A Commission requirement that the developer's information, or the ultimate project-specific delivery assessment that relies upon it, be publicly disclosed for broader planning purposes will have a chilling effect on the exchange of project development information and would likely result in an LSE receiving less specific, timely, and accurate information. Having less reliable information will, in turn, result in less accurate compliance projections, and will ultimately hamper the RPS net short planning process that the Commission is seeking to improve. Additionally, to the extent that an LSE is unable to receive candid and accurate information from its counterparties due to the threat of disclosure, it would likely be forced to increase its margin of procurement to account for greater uncertainty in outcomes. This higher margin will translate into higher RPS Program costs for customers.

Second, disclosure of this information could discourage renewable project developers from contracting with a retail seller, and thus reduce the supply of renewable energy available for procurement at a reasonable cost. For those developers that continue doing business with California retail sellers, an expectation that the Commission will mandate public disclosure of the developer's confidential project development information may result in developers increasing RPS prices to compensate for the potential competitive harm resulting from these disclosures. Third, mandatory disclosure of project development information may negatively impact project viability, creating a reinforcing negative cycle. For example, a public statement that an LSE had found a project likely to fail may become a factor influencing potential financiers in deciding not to finance the project's further development. Finally, the costs of any litigation that results from mandated disclosure of an LSE's counterparties' project development information would also ultimately flow to customers. In sum, it is in the public interest to protect the confidentiality of project-specific viability assessments to ensure a cost-competitive market for renewable energy supplies and to ensure that retail sellers are able to conduct their RPS procurement planning using the best available information.

In light of these considerations, PG&E proposes four alternatives for developing public RPS net short information:

1. Limit public disclosure of a retail seller's net short calculation to the level of aggregated data already presented in PG&E's 2012 RPS Plan. PG&E has no objection to this aggregated data being used in the LTPP or transmission planning processes, so long as the CAISO and CPUC agree that any project-specific assessments, and the underlying counterparty data that informs them, must remain confidential.

2. To the extent greater project-level transparency is necessary, as indicated in the Request for Comments,^{7/} the Commission could develop an independent assessment of the viability of the projects in each retail seller's portfolio. Should it adopt this alternative, the Commission must acknowledge that these independent evaluations may differ significantly from a retail seller's own confidential assessment of its portfolio, and the Commission must therefore ensure that the future procurement decisions made by a retail seller will be evaluated in light of the retail seller's own net short calculation, and not the more general independent evaluation. If an IOU is unable to procure according to its own best forecast of need, it cannot reasonably be held accountable for achieving its RPS compliance targets.

3. Similar to the approach adopted by Southern California Edison in its draft 2012 RPS Plan, the Commission could use a simplifying assumption that only a certain percentage of the aggregated future deliveries from projects executed but not yet under construction will actually succeed. This percentage could be set, and periodically adjusted, for each individual LSE so that its public aggregate forecast results roughly match the aggregate forecast the LSE has projected using its own confidential assessment. Note that this assumption would only be useful in the aggregate, since it assumes all projects engaged in pre-construction development would have the same reduced deliveries regardless of their individual project viability assessments, and so would only be applicable in high-level procurement planning purposes like the LTPP. It would likely not be sufficiently accurate for purposes of project-level interconnection and transmission studies.

4. Given the relatively high correlation between eventual project success and the start of construction, the Commission could create a simpler, but necessarily

^{7/} The Request for Comments notes that "annual generation" is a "necessary data requirement" for use in the LTPP and the CAISO transmission planning process and that assumptions must be "completely transparent." Pg. 2. It appears, therefore, that PG&E's confidential internal assessment of project-specific viability and forecasted deliveries will not be able to be used for these other planning processes.

less accurate, net short calculation methodology that simply limits forecasted volumes to projects that have been approved by the Commission and are either operational or under construction. Again, adoption of this simplified methodology for calculating RPS need should be focused on high-level planning processes and should not preempt a retail seller's own RPS net short calculation for purposes of evaluating specific procurement opportunities.

F. Q6: For generic pre-approved generation (i.e. RAM) is it reasonable to assume that all projects will be 100% successful? If not, propose an alternate solution.

PG&E believes that it is reasonable to assume that all volumes from pre-approved generation programs will be 100% successful. While the eventual success of specific projects may not be predictable, it is reasonable to assume that failed projects will eventually be replaced by other projects that qualify for each of the mandated procurement programs, and that the commencement of deliveries from projects experiencing delays may be adjusted (so long as deliveries commence within the allowed delay provisions in the contract).

G. Q7: Should the Commission expand the definition of re-contracted generation to include online generation set to expire beyond the LTPP 10-year planning horizon?

For the reasons stated in its 2012 RPS Plan, and again summarized on Table 4 of the Request for Comments, PG&E does not believe that an LSE should be required to include re-contracted volumes when calculating its net short position. However, should these be included, re-contracted volume assumptions should cover the same period as that being measured in the Total RPS Risk-Adjusted Net Short calculation summarized above as equation (b).

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H. Q8: Is one utility's methodology preferable? Why?

To the extent that this question refers narrowly to re-contracting projections, PG&E refers to the rationales summarized in Table 4 of the document for not assuming any automatic extension or re-contracting of deliveries from expiring contracts.

More generally, as described in its response to Question 3, PG&E does not believe that a single, universally-applicable methodology exists for assigning success probabilities to projects under development. To date LSEs have had to rely on subject-matter experts to interpret publicly-available data, as well as data provided by project developers. While scoring or ratings models can be employed to produce guidelines for decision-making, the decisions themselves require professional judgment. Evaluating contract viability is an inherently subjective exercise – more of an art than a science.

Because new projects will either succeed or fail, with successful projects generating close to 100% of their contract quantities, PG&E believes that its deterministic approach to calculating its net short position provides the best available near-term compliance forecast.

I. Q9: Should the Commission also account for the retirement of facilities after their useful lives? If so, how should these assets be accounted for in the net short calculation and how should the useful life of a renewables facility be determined?

Given the lack of historical project data, and the fact that delivery and operational risks for renewable projects lie with project developers/operators during the term of a contract with a retail seller, PG&E does not believe that the useful life of renewable facilities should be a factor when calculating a retail seller's net short position. In addition PG&E believes that it would be extremely challenging to explicitly account for the useful life of a generation asset, as the age and operating circumstances of individual facilities will vary across a retail seller's portfolio.

J. Q10: Given that each utility's portfolio needs are different is it possible to create a standardized methodology for determining a minimum margin or procurement? If so, explain your recommended methodology?

PG&E does not believe that a standardized methodology for determining a minimum margin of incremental procurement can be created. The idiosyncratic nature of retail seller's portfolios, and the fact that the need for a minimum margin for incremental procurement will necessarily vary over time, make developing a single methodology impractical.

Respectfully submitted,

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Dated: June 1, 2012

VERIFICATION

I am an employee of PACIFIC GAS AND ELECTRIC COMPANY, a corporation, and am authorized to make this verification on its behalf. I have read the foregoing “**PACIFIC GAS AND ELECTRIC COMPANY’S (U 39 E) RESPONSE TO ENERGY DIVISION REQUEST FOR PRE-WORKSHOP COMMENTS ON A RENEWABLE NET SHORT POSITION CALCULATION,**” dated June 1, 2012. The statements in the foregoing documents are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 1st of June, 2012 at San Francisco, California.

/s/ Jomo A. Thorne

Jomo A. Thorne
Manager, Renewable and Clean Energy Strategy
Pacific Gas and Electric Company

**CERTIFICATE OF SERVICE
BY ELECTRONIC MAIL OR U.S. MAIL**

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is Pacific Gas and Electric Company, Law Department, 77 Beale Street – B30A, San Francisco, CA 94105.

I am readily familiar with the business practice of Pacific Gas and Electric Company for collection and processing of correspondence for mailing with the United States Postal Service. In the ordinary course of business, correspondence is deposited with the United States Postal Service the same day it is submitted for mailing.

On the 1st day of June 2012, I caused to be served a true copy of:

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) RESPONSE TO ENERGY
DIVISION REQUEST FOR PRE-WORKSHOP COMMENTS ON A RENEWABLE NET
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- [XX] By Electronic Mail – by serving the above document, via e-mail transmission, to each of the parties listed on the official Service List for CPUC Docket No. R.11-05-005 with an e-mail address.
- [XX] By U. S. Mail – by placing the above document for collection and mailing enclosed in a sealed envelope, with postage fully prepaid, addressed to those parties listed on the official Service List for CPUC Docket No. R.11-05-005 without an e-mail address.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 1st day of June 2012 at San Francisco, California.

/s/ Stephanie Louie
STEPHANIE LOUIE